

ABSTRACT

5 The present invention provides methods and compositions for photodynamic
therapy. The composition comprises ceramic nanoparticles in which a
photosensitive drug/dye is entrapped. The ceramic nanoparticles are made by
formation of a micellar composition of the dye. The ceramic material is added to the
micellar composition and the ceramic nanoparticles are precipitated by alkaline
hydrolysis. The precipitated nanoparticles in which the photosensitive dye/drug is
10 entrapped can be isolated by dialysis. The resulting drug doped nanoparticles are
spherical, highly monodispersed, and stable in aqueous system. Irradiation with
light of suitable wavelength of the photosensitizing drug entrapped inside
nanoparticles resulted in generation of singlet oxygen, which was able to diffuse out
through the pores of the ceramic matrix. The drug loaded ceramic nanoparticles of
15 the present invention can be used as drug carriers for photodynamic therapy.

BFLODOCS 891482v1 (J3V#01!.DOC)